DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/Ala Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-009184
Date Inspected: 21-Sep-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name: Ma Yun, Guo Yan Fei

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☑ Yes	☐ No	☐ N/A

Bridge No: 34-0006
Component: Tower and OBG Components

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

OBG Trial Assembly Area
This QA inspector randomly observed the following work in progress in the trial assembly area:

5AE, panel point 29, south lower chevron – ZPMC workers removing bolt sets from the connection between the lower chevron and plate. These bolts appeared to be without turn-of-nut markings.

4BW, panel points 27~28 spray painting deck panel area (inside the segment)

4BW, panel points 25~28, floor beams - sanding and brush painting

5CE, panel point 36, north and south longitudinal diaphragms and floor beams – grinding cope holes

3AW, panel points 20~21, north corner assembly - spray painting deck panel area

1E – ZPMC workers appeared to be rigging 5 Goldhofer lift vehicles under the segment.

1AAW/1AW, top of deck joint – 24 excavations between 100mm and 200mm long and up to 20mm deep. No work currently being performed in this area.

Bay 10
This QA inspector randomly observed the following work in progress in Bay 10:

SMAW welding of weld joint NSD1-FCSA3-1A/C-20 located inside north tower shaft, lift 3, skin C, angle clip inside 99M diaphragm. Welder was identified as 056200. ZPMC QC was identified as CWI Li Ming (QC1). The welding variables recorded by QC1 appeared to comply with WPS-B-T-2312.

SMAW welding of various surface repairs on NSD1-FESA3 located on north tower, lift 3, skin E. Welder was identified as 056364. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-345-SMAW-2G(2F)-repair

Bay 9 – PMT

This QA inspector monitored OBG Production Monitoring Test (PMT) #3030 for deck panels DP3030-001, DP3041A-001, and DP3040A-001 at Gantry #2. Prior to the start of the PMT, the magnetic particle test (MT) of the tack welds was noted on the test panel as having been performed by ZPMC MT Inspector Xu Hua Xiang. The visual inspection of tack welds and root gap was performed by ABF Representative Huang Wen Guang (ABF), ZPMC CWI Guo Yan Fei (QC), and this QA inspector. The start time for welding was approximately 0017 hours on 9/22/09 and the finish time was approximately 0044 hours. This QA inspector randomly verified and documented the welding amperage, voltage, and travel speed during the gas metal arc welding (GMAW) and submerged arc welding (SAW) processes, welds 1 thru 6 at the completion of both the GMAW root pass and SAW cover pass. The welding variables recorded by QC appeared to comply with WPS-B-T-2342-U1-(U-rib)-4. The welds were visually inspected by ABF, QC and this QA inspector. QC and ABF informed this QA inspector that all six welds were acceptable and this QA Inspector concurred. This QA inspector randomly witnessed ZPMC ultrasonic testing (UT) inspector, identified as Ma Jilong, perform UT on each of the 500 mm test welds for depth of penetration and conformance. This QA inspector selected fifteen designated locations for macroetch sampling per contract requirements. Each macroetch location was stamped by ZPMC personnel with the number 3030, the letter P, and an individual macroetch identifying number for each macroetch. After removal from each of the weld test specimens, polishing, and acid etching of the selected end, the macroetches were evaluated with a 7X optical magnifier and accepted by QC, ABF, and this QA inspector.

All fifteen sample macros appeared to meet requirements and were noted to appear acceptable. See Caltrans U-ribs PMT Inspection Sheet, ZPMC production monitoring test plate inspection report, and Caltrans Macro Etch Log - all dated 9/22/2008 for additional information.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials

for your project.

Inspected By:	Goulet,George	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer